

## **REMARKS**

### **Remarks**

Applicants thank Examiner for the withdrawal of the rejections made in the previous Action. Examiner has made the following rejections in this action.

- Claims 80 and 94 – 101 under 35 USC 112, first paragraph for allegedly containing new matter.
- Claims 80 and 101 are rejected under 35 USC 103(a) as being unpatentable over Dalum in view of both Kjerrulf and Tang.
- Claims 80, 94 – 97, 100 and 101 are rejected under 35 USC 103(a) as being unpatentable over Dalum taken with both Kjerrulf and Tang and in further view of Ferro, Sacca and Johnston.
- Claims 80, 98 and 101 are rejected under 35 USC 103(a) as being unpatentable over Dalum taken with Kjerrulf and Tang, in further view of Hohlfeld.

### **Rejection Under 35 USC § 112, first paragraph, New Matter**

Examiner has rejected Claims 80 and 94 – 101 for allegedly incorporating new matter and, therefore, failing to comply with the Written Description requirement. Specifically, Examiner states that the “specification failed to provide literal support for the recitation of ‘one or more epitopes identical to the epitopes of the other non-contiguous epitope-containing segments.’” Pending Action, page 7.

Without necessarily agreeing with the Examiner’s argument, Applicants have amended the pending independent claims to remove the element allegedly containing new matter. In view of this amendment Applicants respectfully submit that the rejection is now moot.

### **Rejection Under 35 USC § 103**

The Examiner has rejected Claims 80 and 101 under USC § 103(a) as being unpatentable over Dalum, *et al.*, in view of both Kjerrulf, *et al.*, and Tang, *et al.* Applicants respectfully disagree that the pending claims are obvious over the cited art.

Specifically, the Examiner states:

Dalum et al. teach a vaccine comprising a fusion protein between ubiquitin and an epitope-containing segment ... Kjerrulf et al. teach that incorporating multiple copies of the same epitope enhances the immunogenicity of the fusion proteins. Therefore, one of skill in the art would have known and been motivated to enhance immunogenicity by including multiple copies of the same epitope in the vaccine of Dalum et al. Pending Action, page 6.

The Applicants disagree that the combination of Dalum in view of Kjerrulf and Tang render the present invention unpatentable for the reasons detailed in the previous response (dated Dec. 6, 2007). However, and without necessarily acquiescing to the Examiner's arguments and while reserving the right to prosecute the same or similar claims in the future, the Applicants have amended the pending independent claims. The claims are now directed towards methods utilizing DNA constructs encoding fusion proteins having one or more identical or non-identical epitopes fused to tandem, contiguous or non-contiguous heat-shock or ubiquitin proteins. The cited prior art references, alone or in combination, do not teach or fairly suggest this combination of elements. This novel and non-obvious invention overcomes prior art problems of reduced antibody binding and production of low affinity antibodies. See, paragraph [0038] of the pending specification. Support for the amendments can be found in the published pending specification at paragraphs [0039] – [0043]. Applicants submit that the references cited by the Examiner do not teach or fairly suggest the claimed invention as amended. Based on the foregoing, Applicants respectfully submit that the claims as currently pending are non-obvious and respectfully request withdrawal of the pending rejection and allowance of the claims.

### **Rejection Under 35 USC § 103**

The Examiner has rejected Claims 80, 94 – 97, 100 and 101 under USC § 103(a) as being unpatentable over Dalum, *et al.*, taken with both Kjerrulf, *et al.*, and Tang, *et al.*, in further view of each Ferro, *et al.*, Sacca and Johnston, *et al.* The Applicants disagree that the combination of references cited by the Examiner render the present invention unpatentable for the reasons detailed in the previous response (dated Dec. 6, 2007). However, and without necessarily acquiescing to the Examiner's arguments and while reserving the right to prosecute the same or similar claims in the future, Applicants have amended the pending claims as

detailed above. The claims are now directed, in part, to methods utilizing DNA constructs encoding fusion proteins having one or more identical or non-identical epitopes fused to tandem, contiguous or non-contiguous heat-shock or ubiquitin proteins. Applicants respectfully submit that the combination of references cited by the Examiner do not teach or fairly suggest the currently pending claims. Based on the foregoing, Applicants respectfully submit that the amended claims are non-obvious for the reasons given above and respectfully request withdrawal of the pending rejection and allowance of the claims.

### **Rejection Under 35 USC § 103**

The Examiner has rejected Claims 80, 98 and 101 under USC § 103(a) as being unpatentable over Dalum, *et al.*, taken with both Kjerrulf, *et al.*, and Tang, *et al.*, in further view of Hohlfeld, *et al.* The Applicants disagree that the combination of references cited by the Examiner render the present invention unpatentable for the reasons detailed in the previous response (dated Dec. 6, 2007). However, and without necessarily acquiescing to the Examiner's arguments and while reserving the right to prosecute the same or similar claims in the future, Applicants have amended the pending claims as detailed above. The claims are now directed, in part, to methods utilizing DNA constructs encoding fusion proteins having one or more identical or non-identical epitopes fused to tandem, contiguous or non-contiguous heat-shock or ubiquitin proteins. Applicants respectfully submit that the combination of references cited by the Examiner do not teach or fairly suggest the currently pending claims. Based on the foregoing, Applicants respectfully submit that the amended claims are non-obvious for the reasons given above and respectfully request withdrawal of the pending rejection and allowance of the claims.

### Summary

In light of the above arguments, consideration of the subject patent application is respectfully requested. Applicants submit that all pending rejections have been overcome. Applicants request that the rejections be withdrawn and the application passed to allowance. Any deficiency or overpayment should be charged or credited to Deposit Account No. 50-4514.

Respectfully submitted,



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